# INTRODUCTION

Gull, PAS, and PREVO claims are located in east central Yukon near the N.W.T. border (N.T.S. 105 I/6,11,12). Geologically they are on the southeast margin of Selwyn Basin - major Pb-Zn province. These claims were staked in 1972 as a result of significant lead-zinc discoveries by Canex Placer in the immediate area. They form part of a joint venture agreement with Shield Resources and Numac Oil and Gas (Selwyn Project).

Canex Placer has discovered three major Pb-Zn massive sulphide deposits in this area. Collectively these deposits are termed the Howard's Pass deposits. Estimated reserves are, 400-425 million tonnes of 6-8% (Pb-Zn). The Howard's Pass deposits are shale-hosted, stratiform massive sulphide lenses consisting dominantly of very fine-grained galena and sphalecite. Mineralization is restricted to a single siliceous mudstone horizon wtihin graptolitic, calcareous, carbonaceous shales and porcellanites of the Ordovician Road River group. This type of deposit comprises the target on all three claim blocks.

Figure 1 shows the relative positions of GULL, PAS and PREVO claims with respect to claims held by Canex Placer. Approximate locations of the massive sulphide deposits are also indicated. All three claim groups are adjacent to Placer claims. The feather edge of the Xg deposit outcrops on the PAS claims. GULL and PREVO claims cover similar situations along strike in the vicinity of the ANNIV and OP deposits, respectively.

Because the claim groups were staked before 1980, any assessment work on them is required to be physical work. Considering that all three claim groups have already had geochemical surveys, the most likely acceptable assessment work would be trenching or diamond drilling. In the short term it is least expensive and most convenient to make payments in lieu of assessment for those claims that are to be retained.

As a viable alternative, Canex Placer should be approached about assuming control of these properties. Any long term value to these claims is dependent upon possible development and production plans by Canex Placer. They are also in a much stronger position to apply assessment work towards these claims. The possibility of an arrangement whereby we retain a part interest in the claims should be investigated.

A brief geologic summary for each of the claim groups is presented below. This summary is based on field work completed during 1973 and 1974.

# PREVO CLAIMS

## HISTORY AND RESULTS:

Claims PREVO 1-42 were staked in Fall 1972. During 1973 the area was covered with a reconnaissance geochemical survey (soils, silts, rock for Cu, Pb, Zn). Small grids were established over two areas with anomalous values. Soils were systematically collected on these grids and analysed for Cu, Pb, Zn. A geologic mapping program was run concurrently with the geochemical surveys.

Figure 2 is a summary diagram of the PREVO claims. Only claims PREVO 2, 4, 6, 15, 17, 40 remain in good standing. These claims cover coincident Pb and Zn soil anomalies outlined by the detailed surveys. The anomaly centered on PREVO 4, 17 has high Pb and Zn values of 210 ppm and 3600 ppm, respectively. On PREVO 40, analyzed soil values are up to 110 ppm Pb and 6200 ppm Zn.

Both anomalies occur within the favourable Ordovician Road River shales. The anomalies occur on the margins of a northwest-trending syncline which is cored by younger rocks (see Figures 2 and 3). Subsurface economic potential associated with these anomalies is in the syncline northeast of PREVO 2, 4, 6, 15, 17. We no longer retain control of these claims. The Road River shales containing the anomalies cannot be connected with the OP deposit in subsurface because of an intervening anticlinal core of older strata (see cross-section in Figure 3)

## RECOMMENDATIONS:

The geochemically anomalous horizon of Road River shales on the PREVO claims cannot be connected in subsurface with the OP deposit. Cyprus Anvil has not retained control of the subsurface extension of the favourable horizon. For these reasons it is recommended that the remaining PREVO 2, 4, 6, 15, 17, 40 claims be allowed to lapse.

## REFERENCES:

Curry, J.D. 1973. Geological & Geochemical Report, Prevo claim group. N.T.S. 105-I-12. Cyprus Anvil Mining Corporation in-house report.

## GULL CLAIMS

### HISTORY AND RESULTS:

Claims GULL 1-54 were staked in Fall 1972. During 1973 the claim group was covered by a reconnaissance geochemical survey for Cu, Pb, Zn. An area of higher values was resampled for soils with grid control. A geologic mapping program was conducted concurrently with the sampling. In the 1974 season the 1973 soil grid was extended to the north, south, and west. Geochemical sampling of soils (Cu, Pb, Zn) was completed over the enlarged area. Claims GULL 56-59 were staked as fractions in 1976 on the southwest margin of GULL claims.

Figure 4 is a summary diagram of the GULL claims. GULL 5, 7-16, 18, 27-36, 45, 47, 49, 51, 53, 56-59, remain in good standing. This case group of claims covers a linear Pb soil anomaly with a strike length of roughly 1500 meters. Maximum Pb value in this anomaly is 1150 ppm. A low magnitude, diffuse Zn anomaly is generally coincident with the Pb anomaly.

Figure 5 shows the geology of the GULL claims. Outcrop is sparse. In the immediate vicinity of the Pb anomaly, outcrops consist of the Cambro-Ordovician Kechika Group (Wavy-banded limestone) which underlies the Ordovician Road River shales. The small patch of Road River shale exposed on GULL 13 is a possible up-dip surface exposure of the shales forming the immediate host for the ANNIV deposit.

### RECOMMENDATIONS:

Sparse surface outcrops indicate that the majority of the GULL claims are underlain by Kechika Group. The linear Pb anomaly also appears to be in Kechika Group and is therefore not related to stratiform mineralization in the Road River shales. The source of the Pb anomaly is unknown; one possibility is that it is related to minor galena in a major fault/fracture zone. This would explain both the trend (across the structural grain) and the lack of a strong coincident Zn anomaly. Careful prospecting in the area failed to reveal any mineralization.

Because the geochemical soil anomaly is not associated with Road River shales, there is no potential for a stratiform Pb-Zn massive sulphide on the claim group. The possible up-dip extension of the immediate host shales for the ANNIV deposit outcrop on the southwest margin of the claims. It is recommended that this favourable strip of claims be kept in good standing, and the remaining claims should be allowed to lapse. Specifically, GULL 5, 7, 9, 11, 13, 15, 56-59 should be kept current through payments. GULL 8, 10, 12, 14, 16, 18, 27-36, 45, 47, 49, 51, 53 should be allowed to lapse.

### REFERENCES:

Curry, J.D. 1973. Geological & geochemical report, Gull claim group, N.T.S. N.T.S. 105-I-11. Cyprus Anvil Mining Corporation in-house report.

Adamson, T.J. 1974. Geochemical report, 1974 field work, Gull claim group. N.T.S. 105-I-11. Cyprus Anvil Mining Corporation in-house report.

## PAS

### HISTORY AND RESULTS:

Claims PAS 1-32 were staked in 1972 as a result of of significant Pb-Zn discoveries in the Howard's Pass area. PAS 33-50 were staked in 1973 as fractional claims to provide complete coverage. PAS 1-48 remain in good standing. PAS 49-50 were dropped in 1983 because a legal survey of their locations was required. Figures 6 and 7 contain summary information for the PAS claim group.

During the 1973 field season a reconnaissance geochemical sampling program was conducted over the entire property. In addition, a more detailed grid soil survey was completed in the central portion of the claims. Geologic mapping was completed concurrently with the sampling program.

The 1973 program outlined a coincident Pb and Zn linear soil anomaly which extended along the entire 1500m length of the grid. Maximum values in the soil samples were 5800 ppm Pb and 9800 ppm Zn. The anomaly is restricted to a thin horizon of stratiform galena and sphalerite mineralization in a cherty mudstone within the Ordovician Road River shales. This horizon was sampled in outcrop (6 inches thick) at one showing.

During 1974 the soil grid was extended to the north, west, and east with more extensive sampling. The coincident Pb and Zn linear anomaly was shown to have a strike length of approximately 2200 meters. This anomaly was successfully trenched in eight locations along strike. All trenches reaching bedrock contained highly weathered sections with slightly Pb-Zn values. In addition four shallow diamond drill holes were completed to test the downdip continuity of the mineralized horizon. Total depth drilled was 506.3 meters. Three of the drillholes intersected the mineralized horizon; the fourth was collared too far to the northwest and drilled into older rocks. The mineralized horizon dips steeply at 60-70$^{0}$ to the southwest. Maximum thickness intersected was 15-25 meters; maximum assay value was 5.50% Pb-Zn for a 3 meter interval; maximum depth of intersection was approximately 75 meters.

The 1974 grid soil geochemical survey also delineated a second coincident Pb and Zn anomaly situated northwest of the anomaly which was trenched and drilled. This anomaly has a strike length of over 450 meters and is associated with minor mineralized float occurrences. It also is located within the favourable Ordovician Road River shales (see Figure 6 and 7). No further work has been done on this anomaly.

Figure 7 shows the geology on the PAS claims with the major soil anomalies being indicated in black. Both anomalies are associated with the favourable Ordovician Road River shales. The southern anomaly has been shown to be caused by a thin zone of stratiform Pb-Zn mineralization within a siliceous grey mudstone. This horizon dips steeply to the southwest; it appears to be the northeast, up-dip exposure of the major Xg deposit (see Figure 1). On the PAS claims it has not been tested any deeper than 75 meters; it is presumed to increase both in grade and thickness downdip to the southwest.

The northern anomaly (claims PAS 33, 35, 37) occurs on the southwest margin of a northwest-trenching syncline. Both limbs of this syncline are exposed on the PAS claims; the northeastern limb did not contain any soil anomaly. Because of the limited volume of the synclinal keel of Road River shales, potential for a major stratiform massive sulphide deposit downdip from the anomaly is minimal.

## RECOMMENDATIONS:

The major mineralization on the PAS claims appears to be the up-dip surface exposure of the major Xg deposit. These claims should therefore be kept in good standing through cash payments. PAS 1-15, 28, 30-32, 34-48 are especially critical in this regard.

PAS 17-27, 29 are not critical in terms of the major stratiform mineralization. The geochemical anomaly on these claims has no minimal potential for a major subsurface stratiform massive sulphide deposit. If so desired these particular claims may be allowed to lapse.

## REFERENCES:

Curry, J.D. 1973. Geological and geochemical report, PAS claim group, N.T.S. 105-I-6 and 11. Cyprus Anvil Mining Corporation in-house report.

Adamson, T.S. 1974. Report on 1974 field work, PAS mineral claim group, N.T.S. 105-I-6. Cyprus Anvil Mining Corporation in-house report.